

AMENDMENTS TO THE SPECIFICATION

Paragraph starting at page 4, line 1:

Fig. 1 is a cross section illustrating a first embodiment according to the invention. The first embodiment according to the invention will be described with Fig. 1. An acceleration sensor of the first embodiment according to the invention is configured of a mounting board 12 and a sensor chip 11 in which the mounting board 12 is bonded to the sensor chip 11 with a molding resin 16 region and the sensor chip 11 is formed of a weight 13, a beam 14 and a frame 15. Then, the weight 13 is surrounded by the frame 15. The weight 13 is joined to the frame 15 by a plurality of the beams 14, and the weight 13 is separated from the mounting board 12 by being supported by the beams 15. In the acceleration sensor, the weight 13 senses acceleration toward the mounting board 12 in the vertical direction, and the weight 13 moves vertically. The resistance value of the beams 14 supporting the weight 13 is varied at this time, and thus current is carried through the beams 14 to sense the resistance value for measuring the acceleration. In the first embodiment according to the invention, a thin, rectangular stopper 17 is disposed on the mounting board 12 over a first region 121 of the surface of the mounting board right under the weight 13, while the sensor chip is attached over a second region 122 of the top surface of the mounting board 12. The stopper 17 is disposed to reduce the distance between the weight 13 and the mounting board 12. Therefore, even though a great acceleration is applied to the weight 13, the weight 13 does not move more than a fixed distance in the direction of the mounting board because the stopper 17 on the mounting board 12 contacts the weight 13. Accordingly, the possibility that an excessive stress is applied to the beams 14 supporting the weight 13 to destroy the beams 14 is eliminated. In addition, the possibility that the molding resin 16 bonding the frame 15 to the mounting board 12 flows into the inside of the frame 15 and the molding resin 16 reaches under the weight 13 to bond the mounting board 12 to the weight 13 does not occur because the stopper 17 is raised from the mounting board 12.

Page 5, between lines 7 and 8, insert new paragraph:

Fig. 1 shows that a distance between the top surface of the sensor chip 11 and the bottom surface of the weight 13 is shorter than a distance between the top surface of the sensor chip 11 and the bottom surface of the frame 15.